Notice of Allowability	Application No.	Applicant(s)	
	10/760,299	TAMAKI ET AL.	
	Examiner	Art Unit	
	Tuan H. Nguyen	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *01/21/2004*.

2. ☒ The allowed claim(s) is/are *1-20*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 01/21/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Reasons For Allowance

1. Claims 1-20 are allowed over the prior art record.

2. The following is an examiner's statement of reasons for allowance:

Consider claim 1. Koenck et al. (U.S Pat. 5,555,276) teaches a wireless transmitter for transmitting a signal to a wireless receiver, comprising: an encoder for encoding the transmission signal (see col. 4 line 60 through col. 5 line 9); and a pre-modulation buffer for storing the encoded transmission signal (see col. 5 line 62 through col. 6 line 6).

Kim et al. (U.S PUB. 2003/0074476) teaches a RF module for transmitting the modulated transmission signal, wherein: information on second number of transmission bits is shared with wireless receiver (see page 5 [0052]).

However, the prior art made of record, alone or in combination, fails to clearly teach or fairly suggest a modulator for modulating the encoded transmission signal in accordance with one of a plurality of modulation schemes which define a first number of transmission bits, which is the number of transmission bits per symbol in wireless transmitter, to be equal to or smaller than a second number of transmission bits which is a previously defined number of transmission bits per symbol; and the transmission signal is read from pre-modulation buffer every second number of transmission bits and

inputted into modulator; and modulator modulates first number of transmission bits of the transmission signal inputted thereto, and does not modulate the remaining bits of the transmission signal which is the difference between the second number of transmission bits and the first number of transmission bits, in combination with other limitations, as specified in the independent claim 1, and further limitations of their respective dependent claims 2-4.

Consider claim 5. Kim et al. (U.S PUB. 2003/0074476) teaches a wireless receiver for receiving a signal transmitted from a wireless transmitter, comprising: an RF module for receiving the signal (see page 5 [0052]).

Marzetta (U.S PUB. 2004/0228271) teaches a decoder for decoding the demodulated received signal (see fig. 1 page 3 [0026]).

However, the prior art made of record, alone or in combination, fails to clearly teach or fairly suggest a demodulator for demodulating the received signal in accordance with one of a plurality of modulation schemes which defines a third number of transmission bits, which is the number of transmission bits per symbol, to be equal to or smaller than a fourth number of transmission bits which is a previously defined maximum number of transmission bits per symbol; and a decoder for decoding the demodulated received signal, wherein information on fourth number of transmission bits is shared with wireless transmitter; and demodulator outputs fourth number of transmission bits of the demodulated received signal each time demodulator

demodulates one symbol, as specified in the independent claim 5, and further limitations of their respective dependent claims 6-13.

Consider claim 14. Kim et al. (U.S PUB. 2003/0074476) teaches a signal transmission/reception in a wireless communication system for transmitting a signal from a first wireless station to a second wireless station, wherein first wireless station and second wireless station share information on a first number of transmission bits which is a maximum number of transmission bits per symbol (see page 5 [0052]); and inputting encoded transmission signal to a modulator of first wireless station every first number of transmission bits (see page 5 [0053]); and transmitting the modulated transmission signal from first wireless station to second wireless station (see page 5 [0053]).

Koenck et al. (U.S Pat. 5,555,276) teaches encoding the transmission signal in first wireless station (see col. 4 line 60 through col. 5 line 9); and receiving a transmission signal from first wireless station in second wireless station (see col. 7 line 58-61).

However, the prior art made of record, alone or in combination, fails to clearly teach or fairly suggest modulating in modulator the encoded transmission signal in accordance with one of a plurality of modulation schemes which define a second number of transmission bits, which is the number of transmission bits per symbol in first wireless station, to be equal to or smaller than first number of transmission bits, modulating step including modulating second number of transmission bits of the

inputted transmission signal and not modulating a number of bits of the transmission signal equal to the difference between first number of transmission bits and second number of transmission bits; demodulating in a demodulator of second wireless station the received signal in accordance with one of a plurality of modulation schemes which define a third number of transmission bits, which is the number of transmission bits per symbol in second wireless station, to be equal to or smaller than first number of transmission bits; outputting from demodulator first number of transmission bits of the demodulated received signal each time demodulator demodulates one symbol; and decoding the demodulated received signal in a decoder of second wireless station, as specified in the independent claim 14, and further limitations of their respective dependent claims 15-20.

Conclusion

3. Any response to this action should be mailed to:

Mail Stop_____ (Explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

(571) 273-8300

Hand-delivered responses should be brought to:

Customer Service Window

Randolph Building

401 Dulany Street

Alexandria, VA 22313

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is (571) 272-8329. The examiner can normally be reached on 8:00Am - 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Nay A. can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan Nguyen
Examiner
Art Unit 2618

NAY MAUNG
SUPERVISORY PATENT EXAMINER